

1966 OPERATING SUMMARY

PARRY SOUND

water pollution control plant

ONTARIO WATER RESOURCES COMMISSION

Division of Plant Operations

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ONTARIO WATER RESOURCES COMMISSION

OFFICE OF THE GENERAL MANAGER

Members of the Parry Sound Local Advisory Committee,
Town of Parry Sound.

Gentlemen:

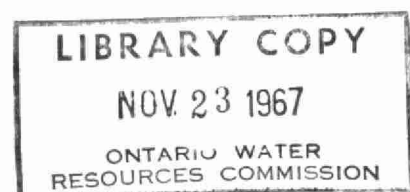
We are pleased to submit to you the 1966 Operating Summary for the
Parry Sound Water Pollution Control Plant, OWRC Project No. 62-S-113.

It is hoped that our joint participation in efforts to combat water pollution
will have even more success in the coming year.

Yours very truly,

A handwritten signature in dark ink, appearing to read "D. S. Caverly", is written over the typed name.

D. S. Caverly,
General Manager.





ONTARIO WATER RESOURCES COMMISSION

801 BAY STREET
TORONTO 5

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J. H. H. ROOT, M.P.P.
VICE-CHAIRMAN

D. S. CAVERLY
GENERAL MANAGER

W. S. MACDONNELL
COMMISSION SECRETARY

General Manager,
Ontario Water Resources Commission.

Dear Sir:

I am happy to present you with the 1966 Operating Summary for the Parry Sound Water Pollution Control Plant, OWRC Project No. 62-S-113.

The report offers a concise summary of operating data for the year and comparisons with previous years where these are applicable and significant.

Yours very truly,

A handwritten signature in cursive script, appearing to read "B. C. Palmer".

B. C. Palmer, P. Eng.,
Director,
Division of Plant Operations.

FOREWORD

● This operating summary contains complete information on the management of the project during 1966. It contains a concise review of the year's plant operation, significant financial details, and a visual presentation in graphs and charts of technical performance.

The information will be of value to interested parties in assessing the adequacy of the project at this time and its ability to meet future requirements.

The report is the result of co-operation by several groups within the Division of Plant Operations. These include the statistics section and the technical publications section. The Division of Finance and the draughting section of the Division of Sanitary Engineering were also closely associated with its publication.

The Regional Operations Engineer, however, has had the primary responsibility for the content, and will be happy to answer any questions regarding it.

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PARRY SOUND
water pollution control plant

operated for

THE TOWN OF PARRY SOUND

by the

ONTARIO WATER RESOURCES COMMISSION

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Assistant Director: C. W. Perry
Regional Supervisor: D. A. McTavish
Operations Engineer: R. Kauppinen

801 Bay Street Toronto 5

'66 REVIEW

The total operating cost for the project was \$25,281.98 in 1966, or a cost of \$109.14 per million gallons treated.

A total of 231.646 million gallons was treated in 1966, for an average daily flow of 635,000 gallons.

The influent had an average strength of 100 ppm BOD and 143 ppm SS, and the removal efficiencies were 48 percent and 68 percent in BOD and SS respectively.

Chlorination of the final effluent began in March and continued for the remainder of the year. A policy of year-round chlorination was adopted and the chlorine dosage rate was increased during the year. These measures were taken because of the conditions of the receiving waters in McCurry Lake and McCurry Creek.

PROJECT COSTS

NET CAPITAL COST (Estimated)	\$836,012.66
DEDUCT - Portion Financed by CMHC (Estimated)	<u>549,696.21</u>
Long Term Debt to OWRC	<u>\$286,316.45</u>
Debt Retirement Balance at Credit (Sinking Fund) December 31, 1966	\$ <u>8,202.74</u>
Net Operating	\$ 25,281.98
Debt Retirement	6,426.00
Reserve	5,289.00
Interest Charged	19,453.98
TOTAL	\$ <u>56,450.96</u>

RESERVE ACCOUNT

Balance at January 1, 1966	\$ 1,322.15
Deposited by Municipality	5,289.00
Interest Earned	<u>186.08</u>
Less Expenditures	<u>-</u>
Balance at December 31, 1966	\$ <u>6,797.23</u>

MONTHLY OPERATING COSTS

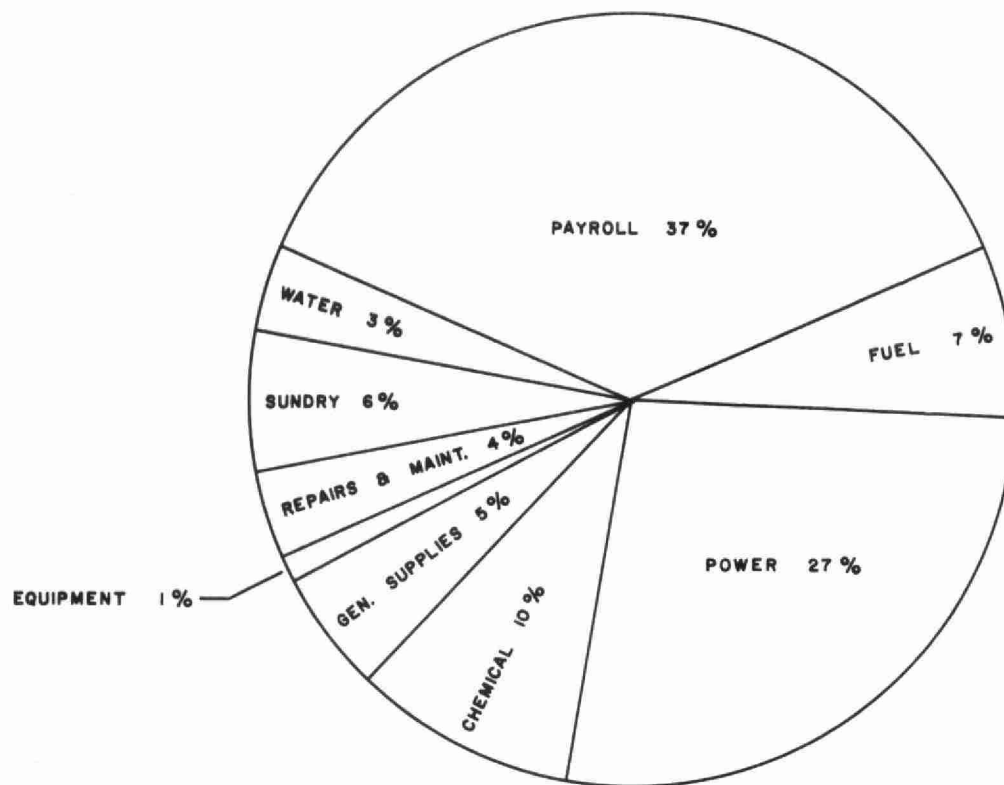
MONTH	TOTAL EXPENDITURE	PAYROLL	FUEL	POWER	CHEMICAL	GENERAL SUPPLIES	EQUIPMENT	REPAIRS & MAINTENANCE	SUNDRY	WATER
JAN	1008.61	714.20	237.75			5.42		5.36	45.88	
FEB	1649.10	645.56	237.75	606.17		49.98		43.51	46.33	19.80
MARCH	1645.21	682.51	237.75	575.11		49.44			80.60	19.80
APRIL	3094.11	1058.96	237.75	591.50	448.05	209.86			486.61	61.36
MAY	1521.80	703.15		602.01		98.09		17.80	14.53	86.22
JUNE	2331.40	760.43	237.75	609.19	456.75	97.98		59.85	34.75	74.70
JULY	1471.10	704.10		541.07		127.68			12.08	36.22
AUG	2754.09	759.45		532.04	570.94	94.67	14.85	171.78	523.76	86.40
SEPT	1917.13	1077.96		577.80		76.53		79.85	22.55	82.44
OCT	1562.23	739.65		573.28	6.56	71.72			80.12	90.90
NOV	2789.64	730.76	440.80	552.06	456.75	180.09	46.42	280.89	15.65	86.22
DEC	3537.56	754.55	212.80	1115.17	456.75	196.03	219.14	213.82	193.44	175.86
TOTAL	25281.98	9331.28	1842.35	6875.40	2395.80	1257.64	280.41	872.86	1556.30	869.94

YEARLY OPERATING COSTS

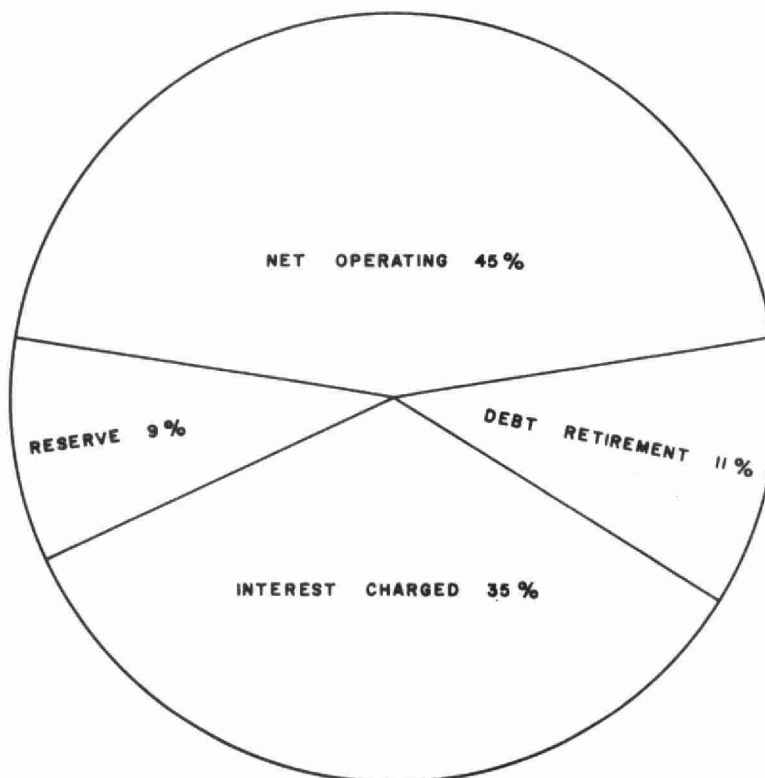
YEAR	M.G. TREATED	TOTAL COST	COST PER FAMILY PER YEAR	COST PER MILLION GALLONS	COST PER L.B. OF BOD REMOVED
1966	231,646	\$25,281.98	* \$16.73	\$109.14	23 CENTS

* BASED ON ANNUAL POPULATION ESTIMATE AND 3.9 PERSONS PER FAMILY

1966 OPERATING COSTS



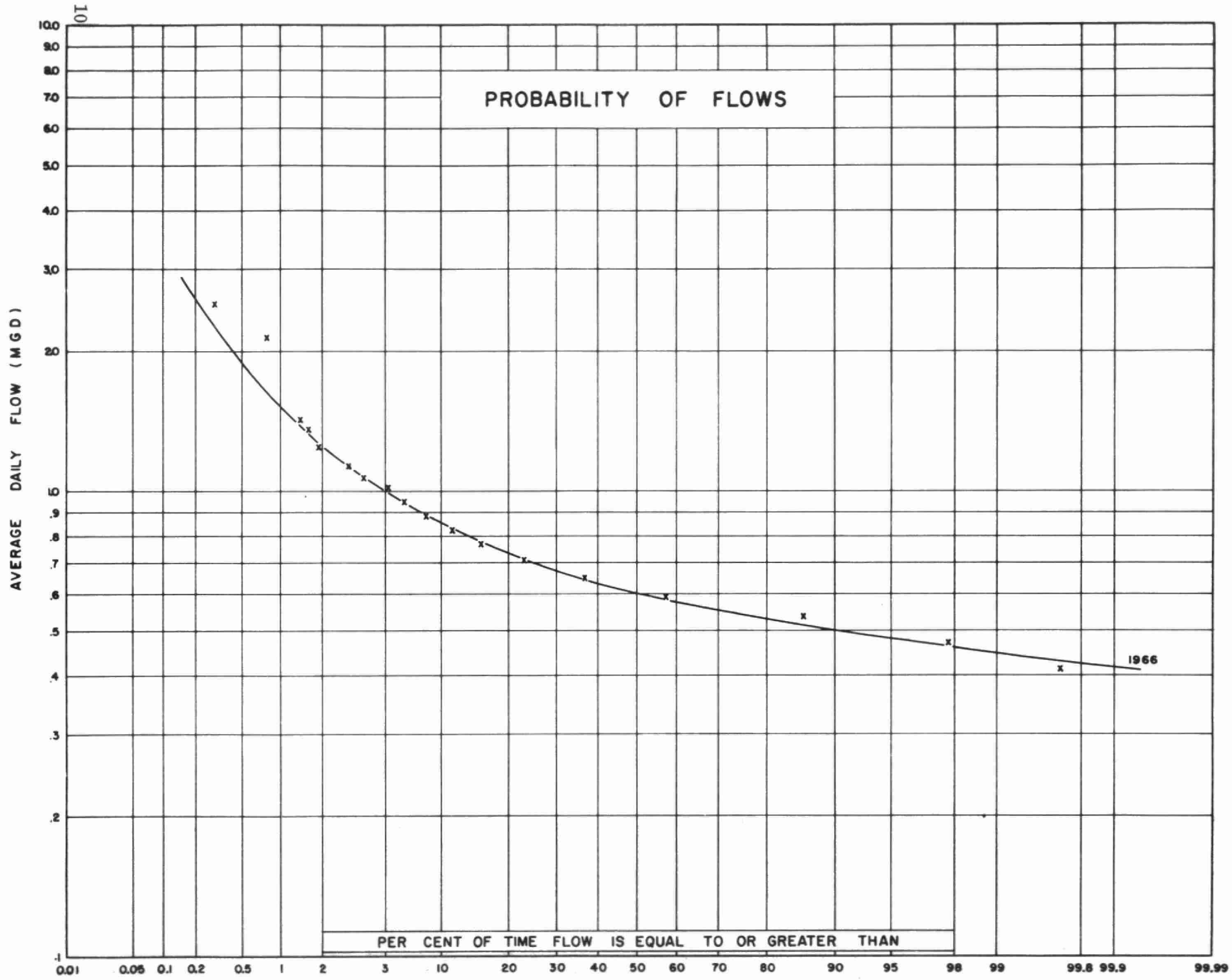
TOTAL ANNUAL COST

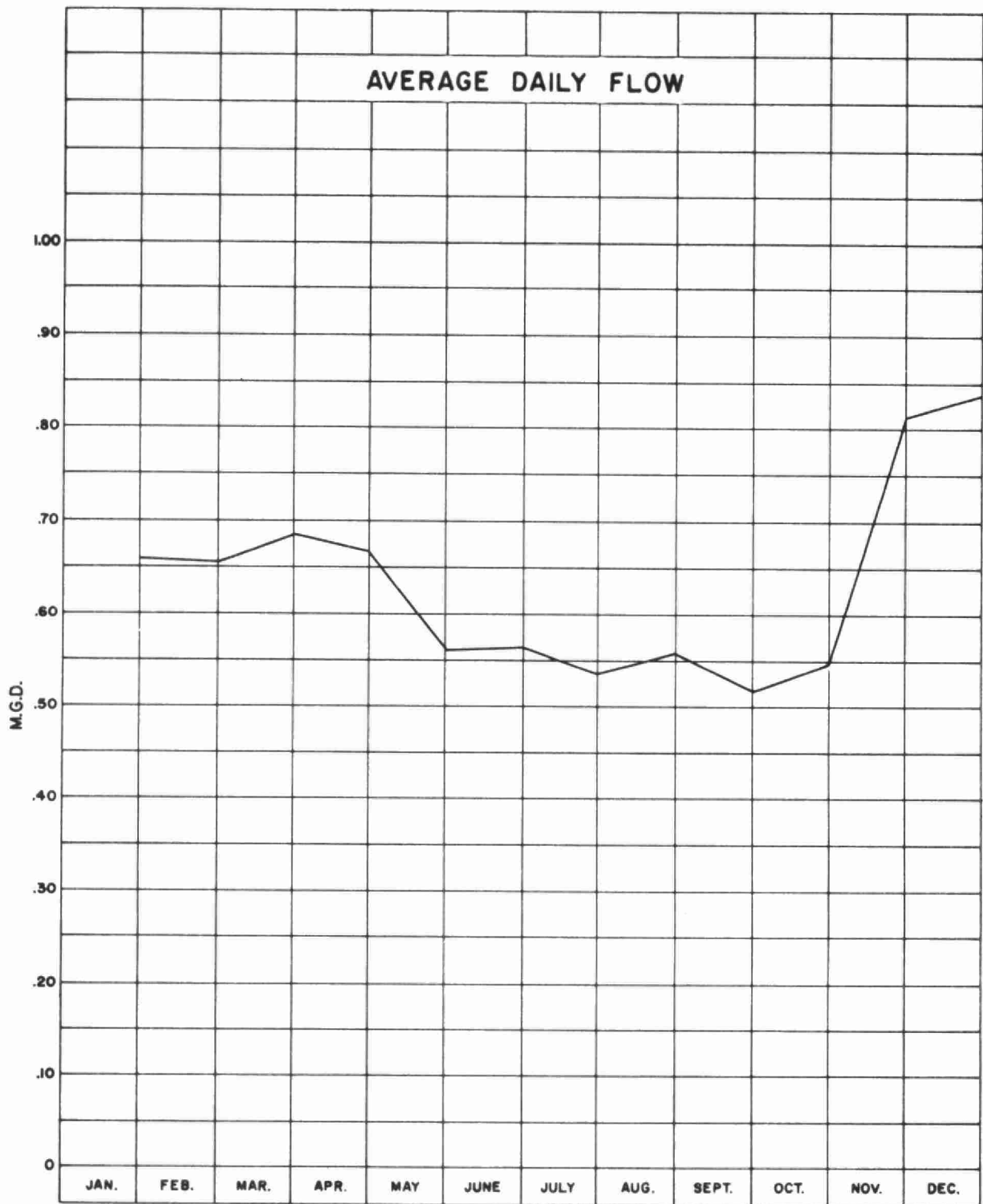


Process Data

It was the first complete year that flow records were taken at the plant and, as such, the flows cannot be compared with those of previous years. A total of 231.646 million gallons was treated during the year for an average daily flow of 635,000 gallons.

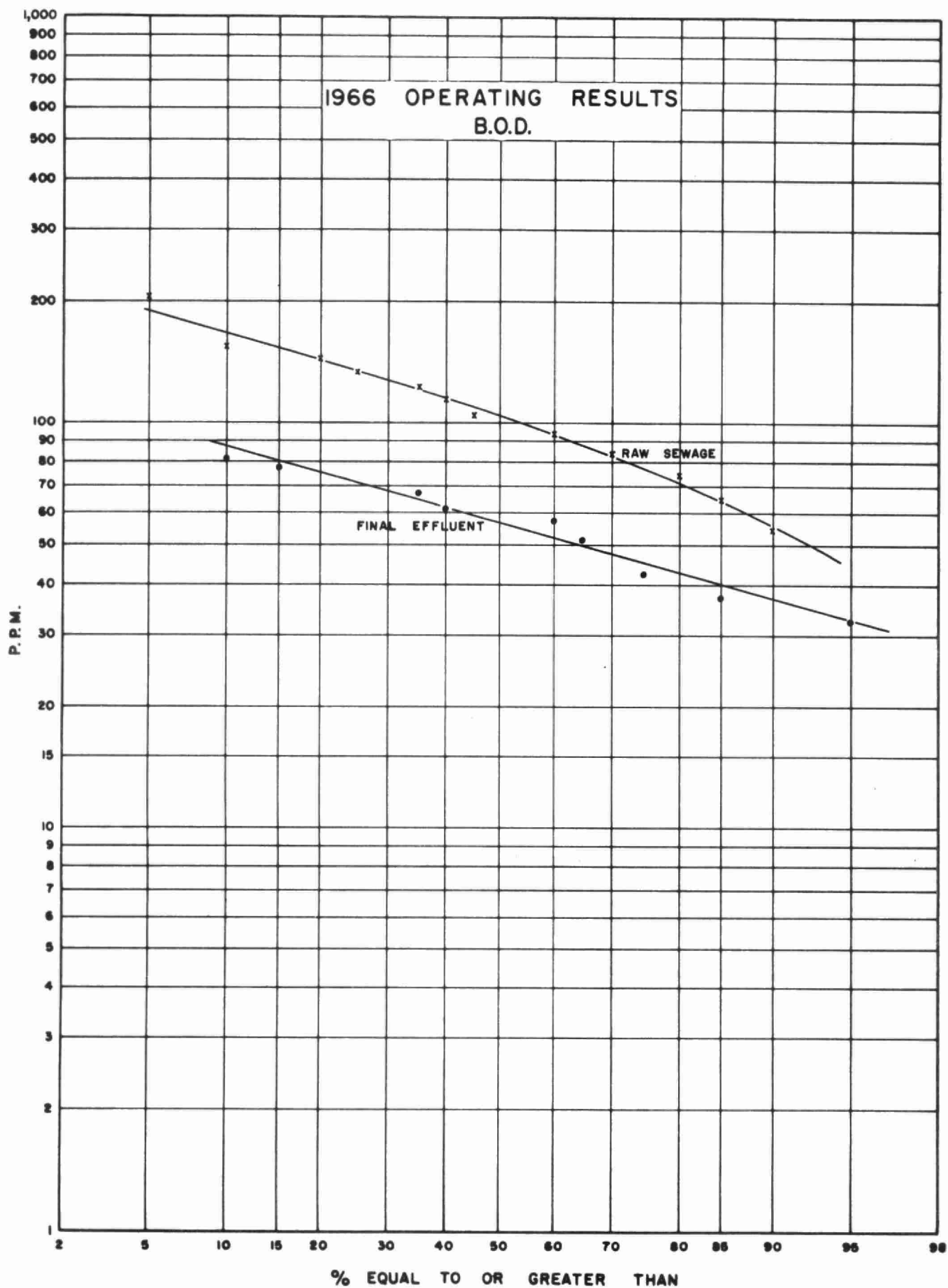
The daily flow exceeded the average design plant flow of 830,000 gallons per day approximately 11 percent of the time. However, the plant has a maximum design plant flow capacity of 2.5 mgd.

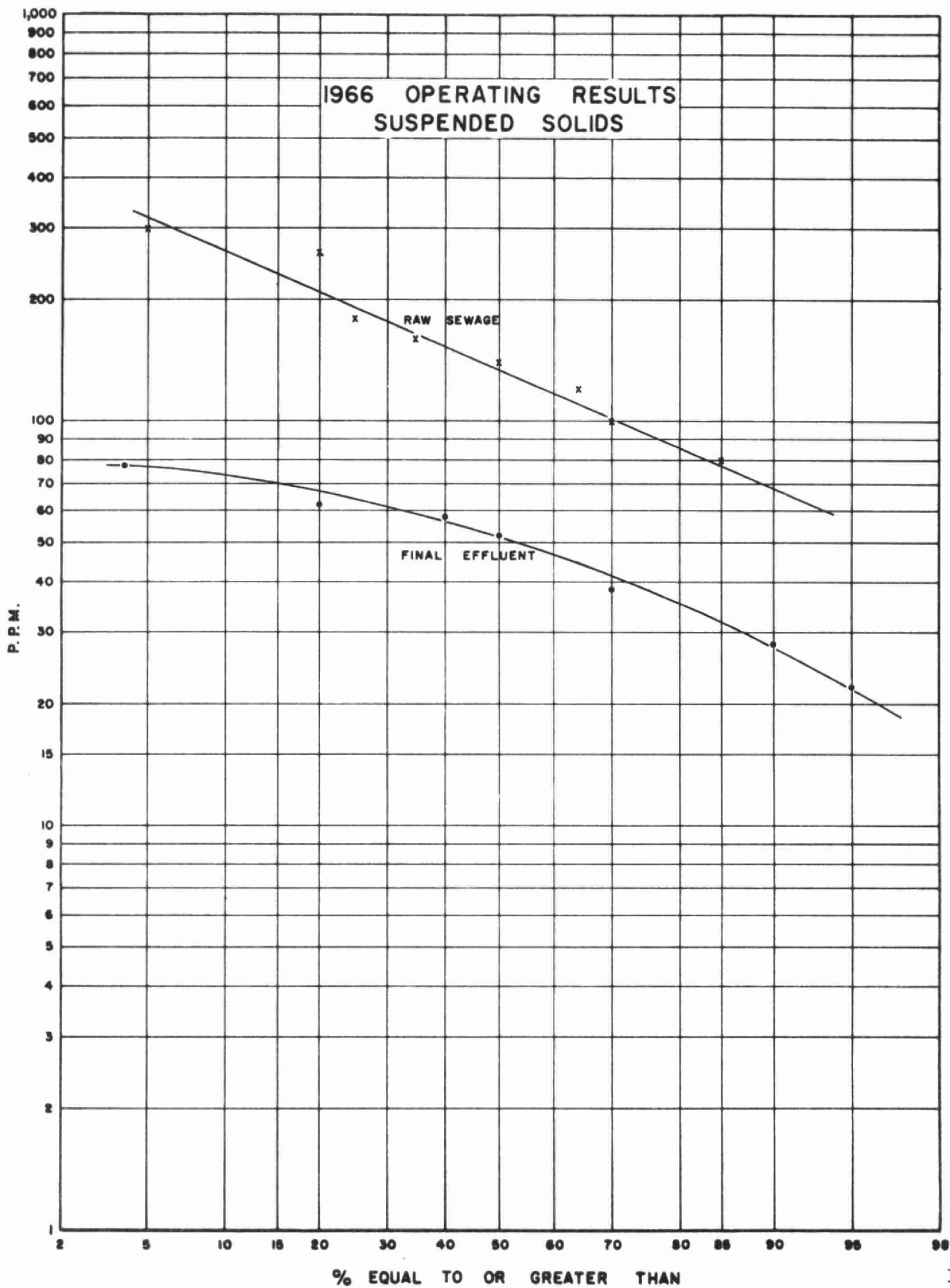


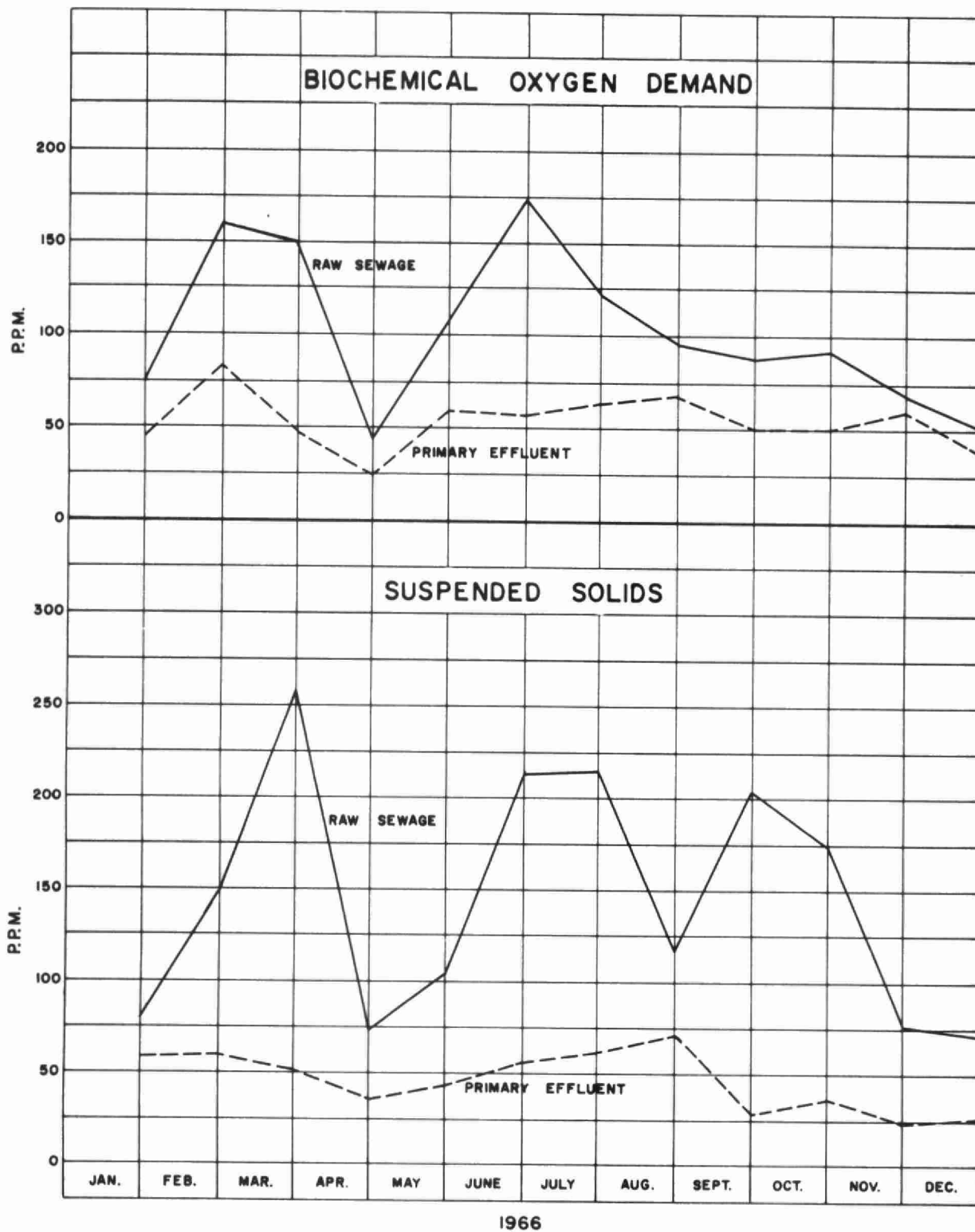


1966

1966 OPERATING RESULTS B.O.D.







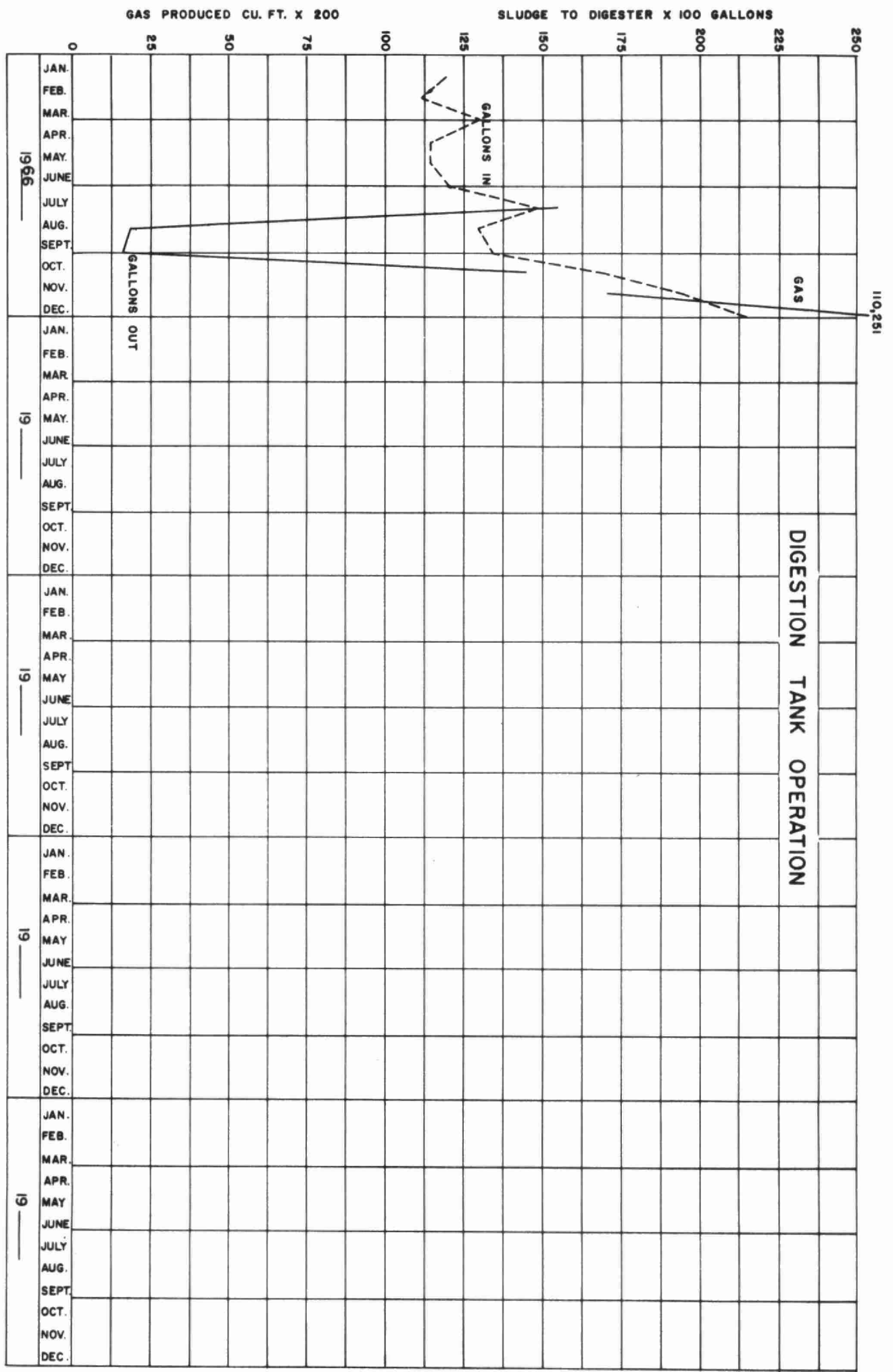
GRIT, B.O.D AND S.S. REMOVAL

MONTH	B. O. D.				S. S.				GRIT REMOVAL CU. FT.
	INFLUENT PPM.	EFFLUENT PPM.	% REDUCTION	TONS REMOVED	INFLUENT PPM.	EFFLUENT PPM.	% REDUCTION	TONS REMOVED	
JAN.	74	43	42.0	3.2	79	58	26.5	2.1	65.0
FEB.	160	82	48.5	7.2	146	60	59.0	7.9	136.0
MAR.	150	48	68.0	10.9	256	51	80.0	21.9	319.0
APR.	43	24	44.0	1.9	74	36	51.4	3.8	66.0
MAY	107	60	44.0	4.1	194	43	58.5	5.3	32.5
JUNE	174	58	66.5	9.8	212	56	73.5	13.2	247.0
JULY	124	64	48.5	5.0	214	61	71.5	12.7	156.0
AUG.	98	67	31.5	2.7	116	71	39.0	3.9	239.0
SEPT.	87	50	42.5	2.9	204	29	85.5	13.9	209.0
OCT.	66	31	53.0	3.0	166	36	78.5	11.0	155.0
NOV.	68	60	12.0	1.0	75	22	70.5	6.4	360.0
DEC.	50	38	64.0	1.6	70	26	63.0	5.8	233.0
TOTAL	-	-	-	55.6	-	-	-	112.3	2217.5
AVG.	100	52	48.0	4.6	143	46	68.0	9.4	184.8

COMMENTS

The average influent BOD was 100 ppm and the SS concentration was 143 ppm for the year. The average final effluent BOD was 52 ppm, and the SS concentration was 46 ppm, representing removals of 48 percent and 68 percent respectively. This treatment efficiency is within the range normally expected for primary treatment plants.

A total of 2,217.5 cubic feet of grit was removed at the plant, for an average of 9.6 cubic feet per million gallons treated.



DIGESTER OPERATION

MONTH	SLUDGE TO DIGESTERS			SLUDGE FROM DIGESTERS			GAS PRODUCED 1000'S Cu. Ft.
	1000'S CU. FT.	% SOLIDS	% VOL. MAT.	1000'S CU. FT.	% SOLIDS	% VOL. MAT.	
JAN.	1.92	2.57	1.66	-	-	-	-
FEB.	1.79	3.62	-	-	-	-	-
MAR.	2.09	11.08	-	-	9.56	-	-
APR.	1.83	5.16	-	-	14.87	-	-
MAY	1.84	8.29	3.11	-	8.12	3.10	-
JUNE	1.93	4.99	2.30	-	14.40	4.77	-
JULY	2.38	8.99	4.18	2.48	15.12	4.19	-
AUG.	2.09	8.50	4.22	0.32	19.38	8.62	-
SEPT.	2.15	6.22	2.78	0.24	15.50	4.89	-
OCT.	2.69	11.10	4.25	2.32	-	-	-
NOV.	3.10	12.34	9.97	-	-	-	* 34.24
DEC.	3.44	3.86	1.91	-	-	-	110.25
TOTAL	27.25	-	-	5.36	-	-	-
AVG.	2.27	7.23	3.82	0.45	13.85	5.11	-

* 11 day's data.

COMMENTS

A total of 27,250 cubic feet of raw sludge was pumped to the digester and a total of 5,360 cubic feet of digested sludge was removed from the digester.

CHLORINATION

MONTH	PLANT FLOW (MG)	POUNDS CHLORINE	DOSAGE RATE (PPM)
JANUARY	20.475	-	-
FEBRUARY	18.367	-	-
MARCH	21.348	963	4.51
APRIL	19.936	834	4.18
MAY	17.351	1089	6.28
JUNE	16.891	1099	6.51
JULY	16.586	1249	7.53
AUGUST	17.336	1463	8.44
SEPTEMBER	15.895	1584	9.96
OCTOBER	16.916	1880	11.11
NOVEMBER	24.373	1892	7.76
DECEMBER	26.172	1938	7.40
TOTAL	231.646	13991	-
AVERAGE	19.304	1399	7.26

COMMENTS

Chlorination of the final effluent started in March and continued for the remainder of the year. A policy of year-round chlorination was adopted at the plant. A chlorine dosage of approximately 4.5 ppm in March was increased to a dosage varying between approximately 7.5 ppm and 11 ppm during the latter part of the year.

LABORATORY LIBRARY



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CONCLUSIONS

The project was well maintained and operated by the plant staff. The plant provided satisfactory primary treatment. However, the receiving waters were not able to assimilate the effluent adequately.

RECOMMENDATIONS

It is recommended that secondary treatment facilities be provided.

